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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,975	06/24/2003	KokHoe Chia	S104.12-0039/STL 11310.00	2047
7590	03/30/2005		EXAMINER	
Robert M. Angus Westman, Champlin & Kelly Suite 1600 900 Second Avenue South Minneapolis, MN 55402-3319			FIGUEROA, NATALIA	
			ART UNIT	PAPER NUMBER
			2651	
DATE MAILED: 03/30/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/602,975	CHIA ET AL.
	Examiner Natalia Figueroa	Art Unit 2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on _____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-18 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) ____ is/are allowed.
 6) Claim(s) 1-18 is/are rejected.
 7) Claim(s) ____ is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 11/28/2003.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 28 November 2003 (11/28/2003) is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because:

- In figure 2, element 208, is missing the line which connects the element to the block it identifies.
- In the specification page 7, line 16, instead of “FIG. 1”, it should read -FIG. 2-.
- In the specification page 7, lines 5, 12 and 15, instead of “FIG. 1”, it should read -FIG. 2-.

Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-8 and 9-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Wong (USPN 6,396,744).

RE claim 1, Wong discloses a process of refreshing data on a storage medium (or memory; abstract, col. 2, lines 6-13 and col. 6, lines 37-46) comprising steps of reading data from a first location on the storage medium (abstract, col. 2, lines 6-13 and col. 6, lines 37-46); storing the data at a second location (or erased sector; abstract, col. 2, lines 6-13 and col. 6, lines 37-46); and storing the data at the first location (abstract, col. 2, lines 6-13 and col. 6, lines 37-46).

RE claim 2, Wong further discloses reading the data from the second location before storing the data at the first location (col. 2, lines 20-21 and col. 6, line 44).

RE claim 3, Wong further discloses that the first and second locations are first and second physical locations and a logical address is initially associated with the first physical location, and the step of storing the data at the second location includes: changing the association of the logical address to the second physical location (col. 2, lines 25-30 and col. 5, lines 40-49).

RE claim 4, Wong further discloses that the step of storing the data at the first location includes changing the association of the logical address to the first physical location (col. 2, lines 25-30 and col. 7, lines 11-42).

RE claim 5, Wong further discloses reading the data from the second location before storing the data at the first location. (col. 2, lines 20-21 and col. 6, line 44).

RE claim 6, Wong further discloses that the step of storing the data at the first location includes changing the association of the logical address to the first physical location (col. 2, lines 25-30 and col. 5, lines 40-49).

RE claim 7, Wong further discloses performing iteratively on the basis of successive logical block addresses, and wherein if the step of storing the data at the first location is interrupted, reading the data from the second location, and storing the read data to the first location (col. 2, lines 48-63 and col. 6, lines 37-50).

RE claim 8, Wong further discloses that in the step of storing the data at the first location includes changing the association of the logical address to the first physical location (col. 2, lines 25-30 and col. 7, lines 11-42).

RE claim 9-16, Wong is relied upon for the same reasons of rejection as stated in the above rejections of claims 1-8. Program claims 9-16 are drawn to the program corresponding to the process of using same as claimed in claims 1-8. Therefore program claims 9-16 correspond to process claims 1-8, and are rejected for the same reasons of anticipation as used above.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2651

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong in view of Alex (USPN 6,429,984).

RE claim 17, Wong discloses a table associating logical addresses to physical addresses of the storage sectors (col. 2, lines 25-30 and col. 5, lines 40-49), and an executable program code including first program code responsive to a logical block address for causing the processor to read data from a first location on the storage medium (col. 2, lines 48-63 and col. 6, lines 37-50); second program code for causing the processor to store the data at a second location (or erased sector; abstract, col. 2, lines 6-13 and col. 6, lines 37-46); third program code responsive to the successful storage of the data at the second location for causing the processor to change the association of the logical address to the second location (col. 2, lines 25-30 and col. 5, lines 40-49); fourth program code responsive to the logical block address for causing the processor to read the data from the second location (col. 2, lines 48-63 and col. 6, lines 37-50); fifth program code responsive to the data read from the second location to cause the processor to store the data at the first location (col. 2, lines 48-63 and col. 6, lines 37-50); and sixth program code responsive to the successful storage of the data at the first location for causing the processor to

change the association of the logical address to the first location (col. 2, lines 25-30 and col. 7, lines 11-42).

Wong fails to explicitly teach a data storage device comprising a magnetic disc drive having a rotatable magnetic disc medium containing a plurality of addressable storage sectors for storing data, and a processor a for controlling operation of the disc drive, the disc drive containing executable program code to refresh data stored in storage sectors.

However, Alex discloses such data storage device comprising a magnetic disc drive having a rotatable magnetic disc medium containing a plurality of addressable storage sectors for storing data (fig. 7 and disclosure thereof), and a processor a for controlling operation of the disc drive (col. 6, lines 46-53), the disc drive containing executable program code to refresh data stored in storage sectors (col. 6, lines 13-24).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to improve the apparatus as disclosed by Wong with the above teachings from Alex to include a refreshing data method within a storage system hence avoiding a hard error in the data of the disk.

RE claim 18, the combination of Wong and Alex are relied upon for the same reasons of rejection as stated above. Wong further discloses that the executable program code includes program code for iteratively executing the first through sixth program codes for each logical block address (col. 2, lines 48-63 and col. 6, lines 37-50).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents are cited to further show the state of the art with respect to refreshing data.

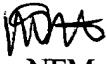
a) Sacks (USPN 6,490,111): Discloses refreshing servo patterns in a disc.

b) Lipovski USPN 5,184,325): Discloses a memory with logic-in-refresh.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalia Figueroa whose telephone number is (571) 272-7554. The examiner can normally be reached on Monday - Thursday 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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